

Educational Services

(SIC 82)

SIGNIFICANT POINTS

- With about 1 in 4 Americans enrolled in educational institutions, educational services is one of the largest industries with over 11 million jobs.
- Most managerial and professional specialty positions—which account for more than 6 out of every 10 jobs—require at least a bachelor's degree, and some require a master's or doctoral degree.
- The number of job openings for teachers should increase substantially due to expected increases in enrollments and retirements.

Nature of the Industry

Education is an important part of life. The type and level of education that an individual attains often influences such important aspects of life as occupational choice and earnings potential. Lifelong learning is important to acquire new knowledge and upgrade skills, particularly in this age of rapid technological and economic changes.

Educational services are provided in cities, suburbs, small towns, and rural areas throughout the Nation. The industry includes a variety of institutions that offered academic instruction, technical instruction, and other educational and training services to about 67 million students in 1998. Most students are enrolled in elementary and secondary schools, and institutions of higher learning. Of these, about 86 percent were enrolled in public schools and 14 percent were enrolled in private schools.

School attendance is compulsory, usually until age 16 to 18, in all 50 States and the District of Columbia, so elementary and secondary schools are the most numerous of all educational establishments, making up 37 percent of the educational services industry in 1997. Elementary and secondary schools provide academic courses, ordinarily for kindergarten through grade 12, in public schools, parochial schools, boarding and other private schools, and military academies. Some secondary schools provide a mixture of academic and technical instruction.

Higher education institutions accounted for about 8 percent of all educational establishments in 1997, and provide academic or technical courses or both in colleges, universities, professional schools, community or junior colleges, and technical institutes. Universities offer bachelor's, master's, and doctoral degrees, while colleges generally offer only the bachelor's degree. Professional schools offer graduate degrees in fields such as law, medicine, business administration, and engineering. The undergraduate bachelor's degree typically requires four years of study, while graduate degrees require additional years of study. Community colleges and technical institutes offer associate degrees, certificates, or diplomas, typically involving two years of study or less.

Establishments that make up the remainder of the educational services industry include libraries; vocational schools, such as data processing, business, secretarial, commercial art, practical nursing, and correspondence schools; and institutions

providing a variety of specialized training and services, such as student exchange programs, curriculum development, and charm, drama, language, music, reading, modeling, and survival schools.

In recent decades, the Nation has focused attention on the educational system because of the growing importance of producing a trained and educated workforce. Government, private industry, and numerous research organizations have become involved in improving the quality of education. For example, businesses often donate instructional equipment, lend personnel for teaching and mentoring, host work-site visits, and provide job shadowing and internship opportunities. Businesses also collaborate with educators to develop curriculums that will provide students with the skills they need to cope with new technology in the workplace.

Secondary schools, in addition to preparing students for higher education, also prepare the large number of students who do not attend college for the transition from school to work. School-to-work programs integrate academic subjects with vocational classes providing skills specific to an occupation or discipline and teach problem solving, communication, and teamwork skills. Programs providing students with marketable skills include cooperative education, tech-prep, and youth apprenticeship programs. Youth apprenticeship programs, although relatively small in number, provide students with occupational skill training by working under the supervision of a mentor. Tech-prep programs begin in high school and continue through 2 years of postsecondary training, usually leading to an associate degree or certificate. Technical vocational education programs at the community college level have grown as employers have increasingly demanded higher levels of education from their employees. While most vocational programs focus on technical skills training—such as those skills needed in manufacturing, health services, or automotive repair—more programs are offering training for service sector jobs, including financial services, hospitality and culinary jobs, and child care.

Many school districts have enacted reforms in response to declining student test scores, concerns that students would not be prepared to enter the workforce, or other reasons. The methods and goals of school reform vary by locale and the results achieved have been mixed over the years. In recent years, the average number of high school credits earned in

mathematics, science, and foreign languages has risen; the high school dropout rate has fallen; and the proportion of women in the labor force with 4 or more years of college has risen. However, many problems remain. American students at the elementary and secondary levels continue to lag behind their peers in some other countries in mathematics and science, and Scholastic Assessment Test scores have risen only marginally. Although the difference in high school graduation rates between blacks and whites has decreased in recent years, graduation rates for Hispanics remain far behind. Social and economic problems continue to affect schools and students—for example, the quality of education in many schools with high minority enrollments and high poverty rates does not measure up to that in schools in other districts. Study of mathematics, science, and foreign languages has increased among high school students, but some employers still complain that many entry-level workers lack the basic writing, math, and computer skills necessary to perform in the workplace. In addition, some school districts are experiencing funding problems under tight government budgets, sometimes forcing them to restrict or eliminate some services.

Working Conditions

In educational institutions with a traditional school year schedule, most workers—including teachers, teacher assistants, library workers, school counselors, cooks, and food preparation workers—work about 10 months a year. Some workers take jobs related to or outside of education during their summer break, and others pursue personal interests. Education administrators, administrative support and clerical workers, and janitors often work the entire year. Night and weekend work is common for adult education teachers, college faculty, and college library workers. Part-time work is common for school busdrivers, adult education teachers, college faculty, teacher assistants, and some library workers. School busdrivers often work a split shift, driving one or two routes in the morning and afternoon; drivers who are assigned field trips, athletic and other extracurricular activities, or midday kindergarten routes work additional hours during or after school.

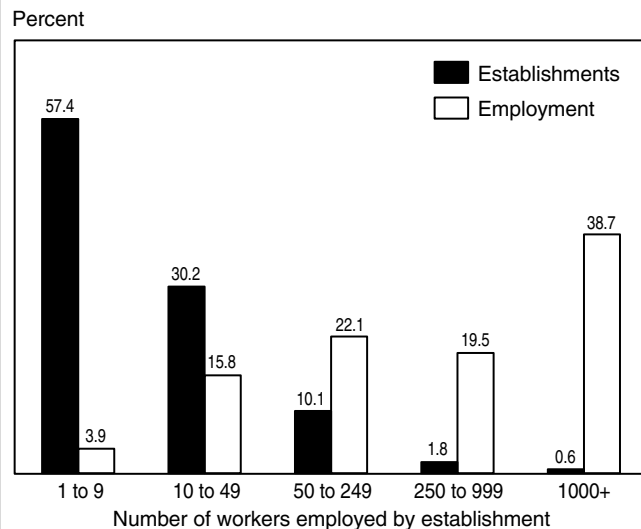
Seeing students develop and enjoy learning can be very rewarding for teachers. Dealing with unmotivated students, however, requires patience and understanding. College faculty and adult education teachers instruct older students, who tend to be highly motivated. These instructors generally do not encounter the behavioral and social problems sometimes found when teaching younger kindergarten, elementary, and secondary school students. Many teachers spend significant time outside of school preparing for class, doing administrative tasks, conducting research, writing articles and books, and pursuing advanced degrees.

Library workers who work at video display terminals for extended periods may experience headaches, eyestrain, or musculoskeletal strain. In general, however, educational services is a relatively safe industry. There were 2.9 cases of occupational injury and illness per 100 full-time workers in private educational establishments in 1997, compared with 7.1 in all industries combined.

Employment

Educational services was the largest industry in the economy in 1998, providing jobs for nearly 11.2 million workers—about 11 million wage and salary workers, and 155,000 self-employed

About 4 out of 5 workers were in educational services establishments with 50 or more workers in 1997



Source: U.S. Department of Commerce, *County Business Patterns*, 1997

workers. About 57 percent of private educational establishments had 1 to 9 workers. However, 4 out of 5 jobs were in private establishments with 50 or more workers (chart).

Employees in educational services were older than average, with 42 percent over age 45, compared to 34 percent of employees in all industries combined (table 1).

Table 1. Percent distribution of employment in educational services by age group, 1998

Age group	Educational services	All industries
Total	100.0	100.0
16-24	10.4	14.9
25-34	19.6	23.9
35-44	25.6	27.5
45-54	29.2	21.0
55-64	12.6	9.8
65 and older	0.3	2.9

Occupations in the Industry

Workers in this industry take part in all aspects of education, from teaching and counseling students to driving school buses and serving cafeteria lunches. Although most occupations are professional, the industry employs many administrative support, managerial, service, and other workers (table 2).

Teachers account for almost half of all workers in the educational services industry. Their duties depend on the age group and subject they teach and on the type of institution in which they work. Teachers should have a sincere interest in helping students and the ability to inspire respect, trust, and confidence. Strong speaking and writing skills, inquiring and analytical minds, and a desire to pursue and disseminate knowledge are vital for teachers. (*Preschool workers*, who nurture and teach children younger than 5 years old, are discussed in the *Career Guide* statement on child-care services.)

Kindergarten and elementary school teachers play a critical role in the early development of children. They usually

instruct one class in a variety of subjects, introducing the children to mathematics, language, science, and social studies. They use games, artwork, music, computers, and other tools to teach basic skills. Kindergarten and elementary teachers also may supervise extracurricular activities after school.

Table 2. Employment of wage and salary workers in educational services by occupation, 1998 and projected change, 1998-2008

(Employment in thousands)

Occupation	1998		1998-2008 Percent change
	Employment Number	Percent	
All occupations	11,175	100.0	15.3
Professional specialty	6,133	54.9	17.7
Teachers, elementary school	1,677	15.0	11.5
Teachers, secondary school	1,425	12.8	22.6
College and university faculty	863	7.7	22.6
Teachers, special education	402	3.6	33.7
Adult and vocational education teachers	268	2.4	14.1
Teachers, preschool and kindergarten	226	2.0	11.5
Instructors and coaches, sports and physical training	138	1.2	11.5
Counselors	129	1.2	22.6
Health assessment and treating occupations	127	1.1	36.9
Librarians, professional	98	0.9	.3
Administrative support, including clerical	2,210	19.8	19.9
Teacher assistants	1,026	9.2	33.7
Secretaries	459	4.1	10.9
General office clerks	209	1.9	12.5
Records processing occupations	164	1.5	9.3
Service	1,238	11.1	.4
Janitors and cleaners, including maids and housekeeping cleaners	489	4.4	.3
Cooks, institution or cafeteria	178	1.6	-10.8
Food preparation workers	170	1.5	.3
Executive, administrative, and managerial	742	6.6	11.5
Education administrators	367	3.3	11.5
Management support occupations ...	140	1.3	15.1
Operators, fabricators, and laborers	367	3.3	9.8
Bus drivers, school	318	2.8	11.5
Precision production, craft, and repair	226	2.0	15.7
Maintenance repairers, general utility	99	0.9	21.5
Technicians and related support	174	1.6	10.9
All other occupations	85	0.8	9.7

Secondary school teachers help students delve more deeply into subjects introduced in elementary school. Secondary school teachers specialize in a specific subject, such as English, Spanish, mathematics, history, or biology. They also may help students deal with academic problems and choose courses, colleges, and careers.

Special education teachers work with students—from toddlers to those in their early 20s—who have a variety of disabilities. Most special education teachers are found at the elementary, middle, and secondary school level. Special education teachers design and modify instruction to meet a

student's special needs. These teachers also work with students who have other special instructional needs, including those who are gifted and talented.

College and university faculty generally are organized into departments or divisions, based on subject or field. Faculty teach and advise college students and perform a significant part of our Nation's research. They also consult with government, business, nonprofit, and community organizations. They prepare lectures, exercises, and laboratory experiments; grade exams and papers; and advise and work with students individually. Faculty keep abreast of developments in their field by reading current literature, talking with colleagues, and participating in professional conferences. They also do their own research to expand knowledge in their field, often publishing their findings in scholarly journals, books, and electronic media.

Adult education teachers work mainly in four areas—adult vocational-technical education, adult remedial education, adult continuing education, and prebaccalaureate training. Adult education teachers in vocational-technical education provide instruction for occupations that do not require a college degree, such as welder, cosmetologist, or dental hygienist. These teachers may also help people update their job skills or adapt to technological advances. Adult remedial education teachers provide instruction in basic education courses for school dropouts. Adult education teachers in junior or community colleges prepare students for a 4-year degree program, teaching classes for credit that can be applied towards that degree. Other adult education teachers teach courses that students take for personal enrichment, such as cooking or dancing.

Education administrators provide vision, direction, leadership, and day-to-day management of educational activities in schools, colleges and universities, businesses, correctional institutions, museums, and job training and community service organizations. They set educational standards and goals and aid in establishing the policies and procedures to carry them out. They develop academic programs; monitor students' educational progress; hire, train, motivate, and evaluate teachers and other staff; manage guidance and other student services; administer recordkeeping; prepare budgets; and handle relations with staff, parents, current and prospective students, employers, and the community.

School and college counselors—who work at the elementary, middle, secondary, and postsecondary school levels—help students evaluate their abilities, talents, and interests so that the student can develop realistic academic and career options. They also help students understand and deal with their social, behavioral, and personal problems. Secondary school counselors use interviews, counseling sessions, tests, or other methods when advising and evaluating students. They advise on college majors, admission requirements, entrance exams, and on trade, technical school, and apprenticeship programs. Elementary school counselors do more social and personal counseling and less vocational and academic counseling than secondary school counselors. School counselors work with students individually, in small groups, or with entire classes.

Librarians assist people in finding information and using it effectively in their scholastic, personal, and professional pursuits. They manage staff and develop and direct information programs and systems for the public as well as oversee the selection and organization of library materials. Librarians may supervise *library technicians*—who help librarians acquire,

prepare, and organize material; direct library users to standard references; and retrieve information from computer data bases—and *library assistants* and *bookmobile drivers*—who check out and receive library materials, collect overdue fines, and shelve materials.

Teacher assistants, also called teacher aides or instructional aides, provide instructional and clerical support for classroom teachers, allowing teachers more time for lesson planning and teaching. Teacher assistants tutor and assist children in learning class material using the teacher's lesson plans, providing students with individualized attention. Assistants also aid and supervise students in the cafeteria, schoolyard, school discipline center, or on field trips. They record grades, set up equipment, and prepare materials for instruction.

School busdrivers transport students to and from school and related events.

The educational services industry employs many other workers who are found in a wide range of industries. For example, *secretaries*, *general office clerks*, and other *administrative support* and *clerical workers* account for about 1 out of 10 jobs in educational services.

Many State and local school systems are engaged in efforts to restructure the learning environment. This is resulting in increased responsibilities, and the need for additional skills, among some occupations in the educational services industry. For example, teachers are more involved in developing curricula and multiple instructional approaches in the classroom, including the use of computers and other technologies. Teachers also are more involved in matters outside the classroom, such as management of the school budget and parent and community relations. Similarly, principals are assuming more responsibility for management of their schools, taking less direction from higher-level education administrators such as school superintendents. In addition, principals are taking a more active role in working with the community. In response to the growing number of dual-income and single parent families and teenage parents, principals are setting up before- and after-school child-care programs and family research centers. They also are establishing programs to combat the increase in crime, drug and alcohol abuse, and violence.

Training and Advancement

The educational services industry employs some of the most highly educated workers in the labor force. College and university faculty generally need a doctoral degree for full-time, tenure-track employment, but sometimes can teach with a master's degree, particularly at 2-year colleges. Most faculty members are hired as instructors or assistant professors and may advance to associate professor and full professor. Some faculty advance to administrative and managerial positions, such as department chairperson, dean, or president.

Elementary and secondary school teachers must have a bachelor's degree and complete an approved teaching training program, with a prescribed number of subject and education credits and supervised practice teaching. All States require public school teachers to be licensed; licensure requirements vary by State. Many States offer alternate licensure programs for people who have bachelor's degrees in the subject they will teach, but lack the necessary education courses required for a regular license. Alternative licensure programs were originally designed to ease teacher shortages in certain subjects, such as math and science. However, the programs have expanded to

attract other people into teaching, including recent college graduates and mid-career changers. With additional education or certification, teachers may become school librarians, reading specialists, curriculum specialists, or guidance counselors. Some teachers advance to administrative or supervisory positions—such as department chairperson, assistant principal, or principal—but the number of these jobs is limited. In some school systems, highly qualified, experienced elementary and secondary school teachers can become senior or mentor teachers, with higher pay and additional responsibilities.

Adult education teachers normally need work or other experience in their field—and a license or certificate when required by the field—for full professional status. Most States and the District of Columbia require adult education teachers to have a bachelor's degree and some States also require teacher certification.

School counselors generally need a master's degree in a counseling specialty or a related field. All States require school counselors to hold State school counseling certification; however, certification varies from State to State. Some States require public school counselors to have both counseling and teaching certificates. Depending on the State, a master's degree in counseling and 2 to 5 years of teaching experience may be required for a counseling certificate. Experienced school counselors may advance to a larger school; become directors or supervisors of counseling, guidance, or student personnel services; or, with further graduate education, become counseling psychologists or school administrators.

Training requirements for education administrators depend on where they work. Principals, assistant principals, and school administrators usually have held a teaching or related job before entering administration, and they generally need a master's or doctoral degree in education administration or educational supervision, as well as State teacher certification. Academic deans usually have a doctorate in their specialty. Education administrators may advance up an administrative ladder or transfer to larger schools or school systems. They also may become superintendent of a school system or president of an educational institution.

Training requirements for teacher assistants range from a high school diploma to some college training. Districts that assign teaching responsibilities to teacher assistants usually have higher training requirements than those that do not. Teacher assistants who obtain a bachelor's degree, usually in education, may become certified teachers.

Librarians normally need a master's degree in library science. Many States require school librarians to be licensed as teachers and have courses in library science. Experienced librarians may advance to administrative positions, such as department head, library director, or chief information officer. Training requirements for library technicians range from a high school diploma to specialized postsecondary training; a high school diploma is sufficient for library assistants. Library workers can advance—from assistant, to technician, to librarian—with experience and the required formal education. School busdrivers, who need a commercial driver's license, have limited opportunities for advancement; some become supervisors or dispatchers.

Earnings

Earnings of occupations concentrated in the educational services industry—education administrators, teachers, counse-

lors, and librarians—are significantly higher than the average for all occupations, reflecting their older age and higher level of educational attainment. Among teachers, earnings increase with higher educational attainment and more years of service. College and university faculty earn the most, followed by secondary and elementary school teachers. Educational services employees who work the traditional school year can earn additional money during the summer in jobs related to or outside of education. Earnings in selected occupations in educational services appear in table 3.

Table 3. Median hourly earnings of the largest occupations in educational services, 1997

Occupation	Educational services	All industries
Education administrators	\$29.12	\$28.02
Teachers, special education	17.63	—
Teachers, secondary school	17.61	—
Teachers, elementary school	16.81	—
Secretaries, except legal and medical	10.76	11.00
Janitors and cleaners, except maid and housekeeping cleaners	9.16	7.44
General office clerks	9.10	9.10
Bus drivers, school	8.58	8.80
Teacher aides, paraprofessional	7.51	7.51

Almost 50 percent of workers in the educational services industry—the largest number being in elementary and secondary schools—are union members or are covered by union contracts, compared to only 15.4 percent of workers in all industries combined. The American Federation of Teachers and the National Education Association are the largest unions representing teachers and other school personnel.

Outlook

Employment in the educational services industry is projected to increase by 15 percent over the 1998-2008 period, the same as the rate of growth projected for all industries combined. In addition to employment growth, the need to replace experienced workers who find jobs in other industries or stop working will create many job openings. Due to the large size of this industry, the number of jobs arising from replacement needs is particularly significant. On the other hand, the number of individuals competing for kindergarten, elementary, and secondary school teaching positions also may increase in response to alternate certification programs, increased salaries, and greater teacher involvement in school policies and programs. Prestigious occupations such as education administrators and college faculty will continue to attract a large number of applicants for available positions.

Several important factors will shape the outlook for the industry. Enrollment growth at the secondary and postsecondary level over the 1998-2008 period should spur employment growth in educational services. At the postsecondary level, in

addition to growth in domestic enrollment, enrollment of foreign students has been growing rapidly. Enrollment of special education students has been rising significantly over the last 20 years, and growth is expected to continue. In addition, teacher retirements are projected to create many new job openings in the industry.

Concerns that the future workforce may not meet employers' needs are leading educational institutions and employers to work together in developing programs to train students for jobs of the future. Initiatives include enhanced programs in reading, writing, and mathematics; emphasis on skills traditionally required only of managers, such as communications, decision making, and problem solving; and increased focus on technical and computer skills. Such emphasis on marketable skills should increase the importance of postsecondary education, and could spur employment growth in the educational services industry.

Projected employment growth varies by occupation. The number of special education teachers is expected to grow the fastest, spurred by growing enrollment of special education students, increased emphasis on inclusion of disabled students into general education classrooms, and the effort to reach students with problems at a young age. The number of teacher assistants also will grow much faster than average as many assist special education teachers; as school reforms call for more individual attention to students; and as the number of students who speak English as a second language rises.

Occupations expected to grow faster than average include secondary school teachers, college and university faculty, and counselors. Average growth is projected for school bus drivers, sports and physical fitness instructors and coaches, adult education teachers, elementary school teachers, and preschool and kindergarten teachers. Little or no growth is expected for librarians. Projected growth reflects demographic changes, enrollment increases, government legislation affecting education, expanded responsibilities of workers, and efforts to improve the quality of education.

Despite an expected increase in education expenditures, budget constraints at all levels of government may place restrictions on educational services, particularly in light of the rapidly escalating cost of college tuition and special education and other services. Cuts in funding could affect student services—such as school busing, educational materials, and extracurricular activities—and employment of administrative, instructional, and support staff. Budget considerations also will affect attempts to expand school programs, such as increasing the number of counselors and teacher assistants in elementary schools.

Sources of Additional Information

Information on unions and education-related issues can be obtained from:

- American Federation of Teachers, 555 New Jersey Ave. NW., Washington, DC 20001.
- National Education Association, 1201 16th St. NW., Washington, DC 20036.

Information on most occupations in the educational services industry, including the following, appears in the 2000-01 *Occupational Outlook Handbook*.

- Adult education teachers
- Busdrivers
- College and university faculty
- Counselors
- Education administrators
- Librarians

- Library assistants and bookmobile drivers
- Library technicians
- School teachers—kindergarten, elementary, and secondary
- Special education teachers
- Teacher assistants